THE PLOUGH BOY.

AND JOURNAL OF THE BOARD OF AGRICULTURE.

BY SOLOMON SOUTHWICK.

"He that observeth the wind shall not sow; and he that regardeth the clouds shall not reap."—BUT—"He that tilleth his land shall have plenty of bread."—*Ecclesiastes.*

Vol. II. *ALBANY: SATURDAY, MARCH* 31, 1821. No. 44.

Cheshire Cheese Making.*

[Selected for the PLOUGH BOY, from Holland's General View of the Agriculture of Cheshire.]

"It it is not supposed, that any improvement of consequence has taken place in cheese-making during a great length of time, except only the improved method of preparing steep. In all dairies, the same points are admitted to be the essential; but although the means of attaining those points are, upon farms similarly circumstanced, so far alike, as to differ materially in the minutiæ only, yet upon those minutiæ much of the art of cheese-making depends."

"That an exact uniformity does not prevail, in every part of the process, is no wonder; for there is not any of the business which is conducted in a dairy, that tends in the least to chemical exactness. Where there is no precision, there can be no just comparison; and where no comparison can be made, there exists no foundation for an attempt at uniformity. The degree of heat at setting the milk together, is never measured; the quantity of steep is guessed at, and its quality not exactly known; the quantity of salt necessary is undefined; and the *sweating* or fermenting of the cheese, when made, is accidental. Under these circumstances, we cannot help expressing, by the way, a wish that a cheese farm of experiment might be established in this county, under the patronage of the Board of Agriculture, and under the management of a person well skilled in chemi-try, that something like scientific priciples might be discovered, on which to conduct the process."

"*Rennet or Steep*—is an infusion of the prepared stomach of a sucking calf, usually called the bag or maw-skin: in order to have this in perfection, the calf should have lived on new milk only, and be quite in health at the time of being killed. Under these circumstances, the maw-skin is always found to contain, when taken out of the calf, more or less of a firm, white, curd-like matter. This chyley matter is frequently salted for present use, and is generally esteemed a proof of its being a good skin; but this proof of excellence is not always to be depended on. When calves are sold, it is the custom of Cheshire to have the maw-skins returned; and it is also customary for those farmers who live near to a butcher's shop, to attend the killing of calves, in order to choose the best.—If the skins of their own calves prove bad ones, they pick those that have curd in them, and taking it out, put it into such of their own skins as happen to have none of it, and leave the empty ones for somebody else. Amongst imported skins, the farmers often meet with those of lambs and kids which answer the intended purpose but indifferently."

Preparation of the Maw-Skin.—"When it comes from the butcher, the chyley matter is taken out, and the skin cleared from slime and every apparent impurity, by wiping or a gentle washing; the skin is then filled nearly full of salt, and placing a layer of salt upon the bottom of a mug, the skin is laid flat upon it; the mug is large enough to hold three skins in a course; each course of skins should be covered with salt, and when a sufficient number of skins are thus placed in the mug, that mug should be filled up with salt, and with a dish or slate over it, be put into a cool place, till the approach of the cheese-making season, in the following year.—The skins are then all taken out, laid for the brine to drain from them, and being spread upon a table, they are powdered on each side with fine salt, and are rolled smooth with a paste roller, which presses in the salt; after that, a thin splint of wood is stuck across each of them, to keep them extended while they are hung to dry."

Milk-House.—"A northern aspect is the best for a milk-house, and it should be so sheltered by buildings or trees, as to keep it from the rays of the sun during the whole day. The perfection of a milk-house is to have an uniform temperature in its contained air, the whole year round.

If this is not attainable, recourse must be had in hot seasons to cold spring water, which should be daily and plentifully poured on the floor; nor is cleanliness, at any time, in any of the departments of the business to be neglected."

Milking.—"The hour of milking, during the summer season, is six, both night and morning. It is a general and very prudent practice for the farmer himself to attend the milking, to assist in carrying the milk into the milk-house, and to see that the cows are properly dripped; for as each succeeding drop which a cow gives at a meal exceeds the preceding one in richness, it is an important point to have the cow's bags completely emptied, and the more particularly so, because if that is not done, it has a tendency gradually to make them go dry. The milking pails, commonly used, will hold about two gallons each, which, when full, are emptied into a bowl or large wooden vessel, that will contain three such pails full, and in that the milk is carried to the milk-house, where it is poured through a sieve into a leaden milk cooler. The sieve is supported over the cooler by a cheese ladder.—This cooler is framed on legs like a table, on the top of which legs is a leaden cistern about nine inches deep, five feet long, and two feet and a half wide. In the bottom of the cistern is a vent hole, to which is fitted a wooden spiggot, or plug. In some dairies, there are coolers sufficient to hold a full meal's milk. In this case the milk stands in them all night, and after its cream is skimmed off in the morning, it is drawn out through the vent hole, into brass pans, and so carried into the cheese tub. Where there is only one cooler, and that insufficient to hold a meal's milk, the milk is drawn off into pans as soon as the cooler is full, which is again filled as it is brought to the house, observing to leave the milk, last brought in, to stand in the cooler all night. The expeditious cooling of the milk has considerable influence in preventing its tendency to acidity in the heat of summer. When the weather is cold, the use of the leaden cooler is generally set aside."

"If milk was repeatedly drawn off into pans, and again returned into the cooler until quite cold, perhaps the quality of the cheese might thereby be improved, and the difficulty in making it be lessened."

Quality of Milk.—"Cheshire cheese is generally made with two meals milk, and that in dairies where two cheeses are made in a day. In the beginning, and end of the season, three, four, and even five or six meals milk are kept for the same cheese. It is difficult to say what proportion of the cream is withheld from the milk, before it is put together; the quantity may be varied, either through supposed judgment and skill

* "The whole of this account refers to cheese of 60lbs. weight. Cheese of this weight is susceptible of every excellence to be found in Cheshire cheese.

in the art, or from other motives. The general custom, however, in the best dairies, is to take about a pint of cream, when two meal cheeses are made from the night's milk of twenty cows. In order to make cheese of the best quality, and in the greatest abundance, it is admitted that the cream should remain in the milk; but whether the cream that is once separated from it, can by any means be again so intimately united with it, as not to undergo a decomposition in the after process, admits of some doubt.—There is, at least, no absurdity in attempting to prevent the separation of two bodies, which it is our professed inttention to unite again. If a cheese, made entirely of the night's milk, on which the cream has risen, be as rich as one made of new milk, all other circumstances being alike, it is a proof that milk and cream, after being separated, may, by heating only, become, as it were, new milk again. Experiment alone can decide this point; but the practice here is to unite the milk and cream, as will be shewn hereafter; and the dairy-men say, that when so united, it differs not from new milk, as to the purposes of cheese-making."

The common mode of making the Steep.—"In the evening, part of a dried maw-skin is cut with a pair of scissors, and put into half a pint of luke warm water, to which is added as much salt as will lie on a shilling. In the morning, this infusion (the skin being first taken out) is put, as hereafter mentioned, into the cheese tub of milk; but so great is the difference in the quality of these skins, that it is difficult to ascertain what quantity will be necessary for the intended purpose. A piece, the size of a half-crown, cut from the bottom end of a good skin (the bottom end being strongest) will commonly be enough to give sufficient strength to the coagulum for a cheese of 60lb. weight; although ten square inches of skin are often found too little."

"It is customary to cut two pieces for each cheese; one from the lower, the other from the upper part of the skin. The cup, in which this skin is infused, ought to be well scalded every day."

Improved Mode of preparing Steep.—Take all the maw-skins provided for the whole season, pickled and dried as before; put them into an open vessel or vessels, and for each skin pour in three pints of pure spring water; let them stand twenty-four hours; then take out the skins, put them into other vessels; add for each one pint of spring water, and let them stand twenty-four hours as before: on taking the skins out the second time, gently stroke them down with the hand into the infusion. The skins are then done with. Mix those two infusions together, pass the liquor through a fine sieve, and add to the whole a quantity of salt, rather more than is sufficient to saturate the water, viz. until a portion of salt remains undissolved at the bottom of the vessel. The next day, and also the summer through, the scum, as it rises, is to be taken clearly off, and as the liquor should not be suffered to remain, without a portion of undissolved salt at the bottom, it will be necessary frequently to add fresh salt, as that which was dissolved will gradually form itself into crystals, and be taken off with the rising scum. Somewhat less than a wine half pint of this preparation will generalty be sufficient for 60lbs. of cheese.—Whenever any of this liquor is taken out for use, the whole should be well stirred up."

Colouring.—"The colouring for cheese is, or at least should be, Spannish arnotta; but as soon as colouring became general in this country, a colour of an adulterated kind was exposed to sale in almost every shop. The weight of a guinea and a half, of real Spanish arnotta, is sufficient for a cheese of 60lbs. weight. If a considerable part of the cream of the night's millk be taken for butter, more colouring will be requisite. The leaner the cheese is, the more colouring it requires. The manner of using arnotta is to tie up in a linen rag the quantity deemed sufficient, and put it into half a pint of warm water over night: the infusion is put into the tub of milk, in the morning, with the steep infusion, dipping the rag into the milk, and rubbing it against the palm of the hand as long as any colour comes out."*

Setting the Cheese together.—"It is, we believe generally admitted, that not only the quantity, but the quality of the curd, as to texture (viz. toughness or otherwise,) depends in a great measure upon the length of the time the cheese is in coming, and that the time again depends on the quantity and strength of the coagulum used, the state of the atmosphere, and the heat of the milk when put together. In this stage of the art, where a degree of accurate certainty seems to be required, there is no other guide but the hand, and the external feelings; the thermometer of a Cheshire dairy-woman is constantly at her fingers ends. Accordingly, the heat of the milk, when set, is endeavoured to be regulated by the *supposed* warmth of the room, and the heat of the external air (having reference also to the quantity, and strength of the steep), so as that the milk may be the proper length of time in sufficiently coagulating, which is generally thought to be about an hour and a half.—The evening's milk (of suppose twenty cows) having stood all the night in the cooler and brass pans, the cheese-maker (in summer), about six o'clock in the morning, carefully skims off the cream from the whole of it, observing first to take off all the froth and bubbles, which may amount to about a pint; this not being thought proper to put into the cheese, goes to the cream mug to be churned for butter, and the rest of the cream is put into a brass pan. While the dairy-woman is thus employed, the servants are milking the cows, having previously lighted a fire under the furnace, which is half full of water. As soon as the night's milk is skimmed, it is all carried into the cheese tub, except about three-fourths of a brass pan full (three or four gallons), which is immediately placed in the furnace of hot water in the pan, and is made scalding hot; then half of the milk thus heated in the pan is poured also into the cheese tub, and the other half is poured to the cream, which, as before observed, was skimmed into another brass pan. By this means all the cream is liquefied and dissolved, so as apparently to form one homogeneous or uniform fluid, and in that state it is poured into the cheese tub. But before this is done, several bowls or vessels, full of new milk, will generally have been poured into the cheese tub, or, perhaps, the whole morning's milk. Care is taken to skim off all the air bubbles which may have formed, in pouring the new milk into the cheese tub."

Variations.—"In many celebrated dairies, during the whole summer, they do not heat a drop of the night's milk; only dissolve the cream in a brass pan, floated or suspended in a furnace of hot water; and this (we are credibly informed) was the practice of a person, who made more than five hundred weight of cheese of the very best quality per cow (of 120 pounds each hundred) in one season. In other dairies, they heat one third, one half, and even more than that of the previous night's milk. In all dairies, they are careful to liquefy or melt the cream well, before it is mixed with the milk in the tub. But whatever may be the custom of heating or not heating milk in any given dairy, the practice of that dairy varies as the weather becomes hot, cold, gleamy, or sultry, &c. We have sometimes cold chilly mornings, even in July, which compel the heating of milk in dairies, where the custom is not to heat it. Again, in the last summer, milk put cool together, from the warmth of the weather, heats in the tub, so as to render the process difficult; and this in dairies where the usual practice is to heat half the night's milk. It is generally on poor clay lands, that the milk most requires warming: on good rich soils the milk will not bear much heating; at least, by so doing, the process of cheese making is rendered more difficult. The lowest degree of heat on setting together, viz. putting the milk into the cheese tub, is one half cooler than milk from a cow; the highest about twice the warmth of that animal's milk; and this is meant as the practice in *summer*, speaking *generally*. But whatever may be the degree of heat supposed most proper for any particular dairy, the night's and morning's milk, and melted cream, being all put into the cheese tub, it is then ready to receive the rennet and colouring, or in the terms of the art, *to be set together*.

"The rennet and colouring being put into the tub, the whole is well stirred together; a wooden cover is put over the tub, and over that is thrown a linen cloth. The usual time of *coming* is one hour and a half, during which time it is frequently to be examined: if the cream rises to the surface, before the coming takes place, as it often does, the whole is to be stirred together so as to mix again the milk and cream, and this as often as it rises, until the coagulation commences. A few smart strokes on different sides of the tub, with the cheese ladder, &c will forward the coagulation, if it is found too long in forming. If the dairy woman supposes the milk, &c. to have been accidentally put together cooler than she intended, or that its coolness is the cause of its not coming, hot water, or hot milk, may be poured into it, or hot water in a brass pan partially immerged therein. But this must be done before it is at all coagulated; for after that takes place, though but imperfectly, it must not be tampered with so as to break the forming curd: a considerable part of the cream

* It has been calculated, that not less than 5 or 6000l. is annually paid in Cheshire, for arnotta, for the colouring of cheese. If the gentry would prefer, and be particular in ordering for their own table, cheese that is not coloured, that ridiculous, and completely unnecessary expense would probably, in a great measure, be done away. *Mr. Fenna.*

would thereby be diverted into the whey, and the quantity of curd much lessened. Before the coagulation takes place, an additional quantity of rennet may also be put in, if thought necessary; but this will, after coagulation, be added with little effect, as no means can be used to mix it with the whole mass, without disturbing the forming curd. If the cheese has been set together hotter than it was meant to be, the opposite means, under the same precautions, may be recurred to. But the more general practice is, to suffer the process to proceed, hot as it is, until the first quantity of whey is taken off; a part of which, being set to cool, is returned into the tub to cool the curd. When the cheese happens to come much sooner than the proper time, owing to too great a degree of heat in the milk on setting or putting together, or to too great a strength of steep, there is less curd; and it is considerably tougher, than when the milk has been set cooler together than usual, or when rather too little steep has been used. In the latter case, the curd is exceedingly tender; and when that happens, a part of the whey is taken out of the cheese tub, and heated as much as may be thought sufficient, to give to the curd, on being mixed with it, a proper degree of toughness. In an hour and a half (as mentioned before) if all goes on well, the coagulation will be formed. This point is determined by gently pressing the surface of the milk with the back of the hand. Experience is the only guide in this test, for the firmness of curd will, (as before stated) from the milk set hot together, be much greater than that from milk which has been set cold together. Another criterion, to judge whether the milk be sufficiently coagulated, is, to lift up the skimming dish, which is always left inverted on the surface of the milk. If the cheese be properly come, the whey and curd will distinctly appear where the skimming dish lay.

[TO BE CONCLUDED IN OUR NEXT.]

Foreign Agricultural and Scientific Notices.

Cultivation of Flowers in Holland.—After passing through the small town of Liss, the road continued with the sand hills in perfect barrenness till we approached that city; whose entrance is decorated with country seats of considerable magnificence and beautiful flower gardens, which supply bulbs to the horticulturists of their own country, as well as furnish the most beautiful specimens of flowers to the rest of Europe.

The attention to the cultivation of flower roots and seeds, independent of the elegance of the pursuit, has by the profits it has brought become an object of some importance. It is the source of prosperity to many respectable families, and in some measure lays all Europe under obligations which are repaid by profit to the cultivators. The number of flower gardens is not above twelve or thirteen, but the operations of each are very extensive. It is said that there are more than twenty acres of land devoted solely to the cultivation of hyacinths, and a large portion to tulips and other flowers. These flowers are principally sold when in full bloom, in Amsterdam, where there is a weekly market on Sunday afternoon, and the whole of Monday; the trade, however, has vastly declined of late years, having sunk in weekly returns from 15 thousand to three thousand florins. The tulip mania which afflicted Holland in the years 1636, 1637, and which involved so many f milies in ruin, has long ceased; but in 1730, a hyacinth mania inferior to it indeed, but equally ridiculous, prevailed: and speculations were made in those flowers to a considerable extent, so that some single bulbs were sold as high as sixty or seventy pounds. There can be no doubt but the taste for cultivating flower-gardens, which has extended itself over almost the whole of Europe, may be traced to this coudtry, which furnished bulbs and seeds till the intervention of successive wars and their interruptions to communication, induced the other nations to propagate those flowers at home, whose growth was most congenial to the soil and climate ---- *Jacob's Travels.*

In a recent publication it is computed that Hunters, Sportsmen, &c. injure the Farmer to the amount of one shilling per acre annually; and that game, by feeding on his crops, consume an equal amount. That the fly, maggot, slug, &c. will, once in five years, cut off the turnips; once in ten years, the clover; and do. 5s. an acre damage to the corn crops---making, on an average, 2s. per acre. The injury done by rats, moles, and mice, in a farm of 200 acres, is estimated at six guineas; by sparrows and other small birds, six guineas; pigeons, jays, ravens, kites, dogs, &c. four guineas. Making in the whole 58*l.* a year, or near 5s. per acre. On the total cultivated superfices of the Kingdom, an annual depredation to the amount of *Ten Millions* sterling per annum.

At Sir Charles Morgan's Annual Cattle Show, which took place at Tredegar, on the 19th December, a sheep was exhibited by Mr. John Collins, a tenant of Sir Charles Morgan, which weighed 230lbs.

Dr. Cartwright has discovered that a solution of common salt, sprinkled on corn infected with mildew, completely removes the disease. In the year 1818, he was engaged in a series of experiments to ascertain the minimum of salt that would be required to destroy vegetation in certain weeds, as coltsfoot, bindweed, the common thistle, &c. The salt it was found had very little effect on weeds or other vegetables when they had arrived at that stage in which they cease to be succulent and are becoming fibrous; but as soon as the rain washed the salt down to their roots, if in sufficient quantity, they languished and died. Happening to have some wheat at the time that was mildewed, the Doctor reasoned thus: "The mildew is known to be a fungus, whose roots being in the straw of the corn, cannot, therefore be very deep; if I sprinkle the corn with a solution of salt, why should not the fungi languish and die as well as weeds when properly dosed at their roots with salt?" The experiments was tried, and the result such as was anticipated, and without any injury to the wheat, salt having no injurious effect on fibrous matter whether vegetable or animal. The expense in this case ceases to be an object; for six or eight bushels will serve an acre, which, at the price of salt applied to agriculture, will be under twenty shillings, and this will be more than repaid by the improvement of the manure arising from the salted straw.—Two men, one to spread and the other to supply him with the salt water, will get over four acres in a day. The operation of the remedy is very quick: in less than eight and forty hours, even the vestiges of the disease are hardly discernible. Its efficacy has been completely verified by more recent experiments.

Domestic Economy.—To render water particularly wholesome and palatable, those who wish to drink it in perfection, should, after having boiled and filtrated it, cause it to be put into a common barrel churn, where it may be agitated to any degree that may be wished for, and then bottled with a couple of dried raisins in each bottle. This will give it a sufficient quantity of fixed air, and becomes truly delicious.

A cheap Fuel.—One bushel of small coal or sawdust, or both mixed together, two bushels of sand, one bushel and a half of clay. Let these be mixed together with common water, like common mortar; the more they are stirred and mixed together, the better; then make them into balls, or, with a small mould, make them in the shape of bricks; pile them in a dry place, and, when they are hard and sufficiently dry, they may be used. A fire cannot be lighted with them; but when the fire is quite lighted put them on behind, with a coal or two in front, and they will be found to keep up a stronger fire than any fuel of the common kind.

Arctic Circle.—The expedition for further discoveries within the Arctic circle, towards the Polar sea, is to be under the direction of Capt. Parry, who is appointed to command the Fury, of 18 guns, now fitting at Deptford. Lts. Read and Nais who served in the late voyage to those inhospitable regions, are also appointed to the same ship. The second in the command is Lieut. Lyon, promoted to the rank of Commander, and to the Hecla. Lieut. Hoppner, the son of the artist of that name, is appointed to the Hecla, and is, with Capt. Lyon, perfectly adequate to take accurate views of such places as the expedition may visit. Nearly all the sea men who served in the late enterprise have again volunteered their services for this one; and Messrs Beverly and Fisher are appointed Surgeons. The last accounts from Lieut. Franklin, state his arrival at Great Bear Lake, (W. long 120 deg. lat N. 67 deg.) where he means to hut for the winter. He could have reached Coppermine River, but not in time to obtain the desired information this season; and he, therefore, resolved to winter at the Great Bear Lake, and to start with the return of proper weather, so as to have the whole summer before him for the object of the expedition.

The Chevalier THEODORE CAREZZINI, a Piedmontese, has invented two kinds of round tables, which he calls geocentric and heliocentric tables, and by their aid, a person without any knowledge of mathematics can, in a very short time, thoroughly observe the course of the stars, and explain the celestial phenomena. By means of these instruments, you may, in the open air, obtain a meridian line in a few minutes; and in a journey by land, never miss the direction to the north. You may also learn the hour during the night, without a watch.

The canal cut between Kamauish and Alexandria, by order of the Pacha, has been productive of great utility to commerce. This work was completed in 3 months by 25,000 men.

It is at length ascertained that the river *Niger* empties itself into the Atlantic Ocean, a few degrees to the northward of the equator. This important fact is confirmed by the arrival of Mr. Dupuis from Africa.

During the time that *Moore's Almanack* was conducted by the late Henry Andrews, of Royston, the sale rose to four hundred and thirty thousand annually, for which this extraordinary man never received more than 25*l.* a year.

M. de CHATAUBRIAND is said, in a Paris paper, to have sold his history of France for 60,000 francs.

The recently discovered planet *Vesta*, may now be perceived with a telescope of a moderate power in the constellation Cancer; it appears like a star of the fifth or sixth magnitude.

On rendering cloth incombustible.—M. Gay Lussac, has proposed a means of rendering the various tissues of cloths, stuffs, &c. incombustible; and the means he recommends appear superior to those which as yet have been proposed; that the combustibility of these substances is diminished by their having been immersed in solution of certain salts, as of allum, muriate of soda, &c. has been long known. M. Gay Lussac, considered that those salts should possess this property most eminently, which entered most readily into fusion, being enabled by that means to cover perfectly the fibre of the substances, and preserve them from the contact of the air. Guided by this thought, he substituted phosphate of ammonia and borates of soda for alum, &c. and he found that muslins thus treated could be placed in contact with ignited bodies without danger. They were carbonized, but would not inflame.

The *Narrateur de la Meuse*, French paper, contains the following article on the cure of two deaf and dumb persons, who recovered their hearing and speech. This novel and successful operation was performed by a young practitioner, a doctor of medicine, of the faculty of Paris, ex-surgeon to the fourth regiment of cuirassiers, and now established at Mibiel (Meuse.) The two deaf and dumb who underwent the operations (whereby he perforated with dexterity and success the *meatus auditorius*) are Mademoiselle Bivier de St. Mibiel, aged 16 years, and the Sieur Tou-saint, son of the assistant magistrate of Hans-sur-Meuse, aged twenty-eight years.

The young girl is doing extremely well. It is more than a month since she underwent the operation. Her left ear is perfectly healed, and the opening made to the tympanum always continues; which is absolutely necessary. She takes notice of the least sounds and begins to articulate words in a very satisfactory manner. Her vivacity pleases and her figure changes for the better. She is incessantly humming various airs which her sisters teach her.

The young man of Hans-sur-Meuse, who was operated upon a short time since, hears as well as his comrades, and even more lively. His right ear is finer than his left—he makes constant efforts to pronounce all sorts of words. The surgeon from whom we have the particulars, hopes that in three or four months the two subjects will speak perfectly. It is evident that they must be instructed like children, who begin to make the first efforts to articulate.

Mr. Deleau informs us, that he is constructing an instrument, which will afford the happy facility of finishing the operation in three minutes, by which its success will be more certain. By means of this instrument he will raise on the tympanic membrane enough of substance to prevent the necessity of introducing probes into the perforation during from thirty to forty days. He is of opinion, that he can restore the hearing of all those who have been deprived of it by the obstruction of the Eustachian organ, and by the obesity of the membrane of the tympanum.

An academy for the teaching of short-hand had been opened in Lisbon for the purpose of training up reporters of public debates, &c. A literary and political society had also been established, and orders sent to this country for a regular supply of journals, pamphlets, &c.

M. Iskenteri, a Greek merchant settled in Constantinople, has published in Greek, an elegant translation of Zadig, a romance of Voltaire. He has also translated the voyage of Antenor, and is now printing it. The author is indefatigable in his exertions for the diffusion of knowledge and the civilization of Greece in general.

A New System of Cultivation,

Without Lime, or Dung, or Summer Fallows: as practiced at Knowle Farm, in the County of Sussex. By Major-General ALEXANDER BEATSON, late Governor of the Island of St. Helena, and Honorary Member of the Board of Agriculture.

"Petty operations, incessantly continued, in time surmount the greatest difficulties, and mountains are levelled, and oceans bounded, by the slender force of human beings."—*Doctor Johnson.*

III. ON PREPARING THE LAND FOR THE SEED.

An easy and expeditious method of obtaining more perfect pulverization, than by ploughs and harrows.—Observations on deep and frequent ploughings.—More exertion of animal power required in ploughing at once deep, than by repeating the operation twice, to obtain the same depth.—New implements adopted.—The requisite power to prepare land greatly diminished.—Concise description of the implements.—The daily effect of each implement—and the daily expense of each operation.—The whole illustrated by practica examples.

[CONTINUED.]

Before I can convey an accurate idea of this process of preparation, it is necessary I should briefly describe the implements which are used in the several operations above mentioned; and then to deduce, from the daily application of manual and animal labour to each implement, the actual expense of each operation per acre.

1. The *Scotch plough—or Plenty's patent* plough. Either of these, with three horses, breaks up the land at the rate of an acre per day.

2. *Small sacrifiers* of my own invention. These implements, with the power of one horse to each, perform a variety of operations, at the rate of three acres per day. Hitherto they have been chiefly used for loosening stubble, pulverising the soil—and for hoeing between three rows of corn. (See Plate I. Fig. 1.)

3. *Stubble rake.* It is formed of three parallel bars, strongly braced together. On the foremost bar are two wheels at the extremes. The hindermost bar, six feet and two inches long, contains 21 teeth. It is drawn by two horses, and rakes at the rate of six acres per day.*

4. *A pair of light harrows.* Goes over 10 acres per day.

5. *The marking and warping plough.* This is of a light construction. It is drawn by two horses. It has a common plough-share, but no coulter. The mould boards which form nearly a right angle over the hind part of the share, expand to four feet and two inches. The hind parts of the mould boards are elevated about 4 in. above the level of the sock. Upon the beam is a pivot on which turns the centre of a light wooden rod about 11 1-2 feet in length. At the extremes of this rod, the markers, which are pieces of wood, or iron, are loosely suspended so as to trail at the distances of five feet six inches, from the pivot; these markers by touching the soil (previously reduced to a fine state) leave sufficient marks for the plough to return upon. This simple apparatus performs, at once, three distinct operations. The plough-share forms the warp furrow—the mould-boards move or scrape up the soil on the right and left, and form two half warps; and the markers trace two lines, parallel to the furrow,—at the distance of five and a half feet. These several operations, when properly executed, give the field exactly the appearance of a garden laid out in beds.—(See plate I. Fig. 3.)

6. *Single harrow.* This, with one horse, is drawn over the middle of each warp, for the purpose of smoothing that part, prevously to drilling the crop.

7. *Drill machine.* Of my own invention.—It is drawn by one horse—and drills three rows in each side of the warp—so that each warp, five feet and a half wide, has six rows of grain nine inches apart. This drill performs three acres per day. Three small shares, in front of the seed box, open the seed furrows. The two side wheels turn a square iron axle, on which the seed rollers, with cups, are fixed. The seed is thus discharged into three spouts, or conductors loosely suspended, which convey it into the seed furrows. These are immediately closed by the 4 small shares, placed at a small distance behind the conductors, which perfectly cover the seed to any depth that may be required. For this purpose, the seven shares admit of adjustments—and the quantity of seed to be drilled, is regulated in the usual manner by a slider and brush, in each of the three hoppers, or divisions, in the seed box.

To stop the discharge of the seed, the two side wheels are raised off the ground by the handles, and the machine is turned upon the front wheel, at the ends of the warps. With two of these drills, I have drilled several hundred acres in the most perfect manner. (See Plate II. fig. 4.)

8. *Strike plough.*—This is a light double mould board plough without a coulter. It is also drawn by one horse, and follows the drill, and completes the warps, by deepening the furrows on each side, for carrying off the rains that descend along the sloping sides of the warps.

These implements are used exactly in the order in which they are placed in the preceding list. The expense of the several operations may be readily computed, by rating each horse at 2*s.* 6*d.*—a man at 2*s.*—and a boy, or driver, at 6*d.* per day. These data, combined with daily effect, or performance, of each implement, are sufficiently accurate for computing the expense per acre—or for comparing one mode of cultivation with another.

The expense of ploughing an acre, with the Scotch or the patent plough, may, according to the above method be computed thus;

Three horses at 2*s* 6*d.*	0 7 6
Ploughman 2*s.* 6*d.*—driver 6*d.*	0 3 0
	*l.*0 10 6

The *small scarifier* goes over three acres per day; rating the horse at 2*s.* 6*d.* the man 2*s* and the boy at 6*d.*—the total is five shillings, or sixty pence, which divided by three, gives 20 pence for scarifying, or hoeing, an acre, once over.

The daily expense of the *stubble rake*, with two horses, a man and a boy, is seven shillings and six pence—which, divided by six acres, gives fifteen pence per acre.

A pair of light harrows, with two horses and a driver, will be seven shillings per day—which, divided by eight acres, will give ten pence half-penny per acre for each harrowing.

The *marking and warping plough* is worked at the same expense as the stubble rake, viz. seven shillings and six pence; but, as the marking or warping plough performs eight acres per day, the expense of its operations is ten pence half-penny per acre.

The daily expense of a *single horse harrow* and a boy, is three shillings; and as it goes over about six acres per day, or double the space performed by the drill, I rate this sort of harrowing at six pence per acre.

The *drill machine* having one horse, a man and a boy performs at the expense of five shillings per day, which divided by three acres, gives twenty pence for drilling an acre.

The daily expense of the *strike plough* with one horse, a man and a boy, is also five shillings; but as it performs at the rate of ten acres per day, by making furrows five feet and a half asunder, I rate this operation at six pence per acre.

By altering the positions of the teeth, or tines, of the *small scarifier*, it becomes an excellent *horse-hoe*, and stirs between three rows of corn, at the rate of three acres per day. The expense of hoeing is therefore the same as scarifying, that is twenty pence per acre.

The following examples comprise a summary of the processes of cultivation in the order in which they take place; and show the expense of the several operations, and the total expenses of cultivating an acre.

NEW SYSTEM.

EXAMPLE I. Process and expense of cultivating an acre of wheat upon a clover lay.

		l.	*s.*	*d.*
Ploughing once with three horses			12	
Harrowing once				10 1-2
Twenty cart loads of calcined clay	*	1		
Carting from the kiln	*		9	
Beating and spreading	*		2	
Scarifying three times			5	
Marking and warping				10 1-2
Harrowing the middle of warps				6
Drilling the seed			1	8
Deepening warp-furrows				6
Labour and manure			2	12 5
Seed wheat two bushels *l* 1				
Rent and taxes 1 10 —			2	10
Total		*l.*	5	2 5

If the items marked * be deducted from *l*2. 12*s.* 5*d.* the expense of *pulverising and drilling* this acre amounts to *l*1. 1*s.* 5*d.*

Later experience has proved that the ploughing may be dispensed with, and that by two additional scarifyings, making in all five scarifyings, the same degree of pulverization is obtained, and the expense of cultivation is thereby reduced to *l*4. 13*s.* 9*d.* because, the two additional scarifyings would be three shillings and four pence, which being deducted from twelve shillings for the ploughing, leaves a difference of eight shillings and eight pence, to be subtracted from *l*5. 2*s.* 5*d.*

EXAMPLE II. An acre of wheat after wheat.

		l.	*s.*	*d.*
Scarifying the wheat stubble twice			3	4
Raking ditto	*		1	3
Collecting and burning ditto (contract allowance)	*		4	
Ten loads or 160 bushels, calcined clay	*		10	
Carting ditto from the kiln	*		4	6
Beating and spreading ditto	*		1	
Scarifying three times			5	

* A stubble rake, corresponding with this description, has been in use during the last two years, but its form has been altered,—by removing the two wheels from the front bar, and placing a single wheel in front of that bar, in the manner represented in Plate I. fig. 2. By this alteration it is more easily turned at the head lands.

Marking and warping						10	1-2
Harrowing the middle of warps						6	
Drilling the seed					1	8	
Deepening the warp furrows						6	
Labour and manure					1	12	7 1-2
Seed wheat two bushels	*l.*	1					
Rent and taxes		1	10	—	2	10	
Total	*l.*				4	2	7 1-2

If the items marked * be deducted from *l*1. 12. 7 1-2. the expense of *pulverising and drilling* this acre amounts to 11*s*. 10 1-2*d*.

EXAMPLE III. An acre of wheat after tares, beans, or peas.

		l.	*s.*	*d.*		
Scarifying twice			3	4		
Raking & burning stubble and spreading *			3	6		
Scarifying three times			5			
Marking and warping				10	1-2	
Harrowing the middle of warps				6		
Drilling the seed				1	8	
Deepening warp furrows					6	
Carting 20 loads of clay-ashes from kiln *				9		
Spreading ditto for contract	*			1	6	
Total labour			1	5	10	1-2
20 loads of clay-ashes	*l.*	1				
Seed wheat 2 bushels		1				
Rent and taxes		1	10			
Total	*l.*		4	15	10	1-2

If the items marked * be deducted from *l*1 5*s*. 10 1-2*d*. the expense of *pulverising and drilling* this acre amounts to 11*s*. 10 1-2*d*.

EXAMPLE IV. An acre of wheat after potatoes.

		l.	*s.*	*d.*		
Scarifying twice			3	4		
Harrowing once				10	1-2	
Marking and warping				10	1-2	
Harrowing middle of warps				6		
Drilling the seed			1	8		
Deepening warp furrows				6		
Labour			7	9		
Seed, two bushels	*l.*	1				
Rent and taxes		1	10	2	10	
Total	*l.*		2	17	9	

In this example, the expense of *pulverising and drilling* the seed, was only seven shillings and nine pence; but it is proper to observe, that the potatoes had been taken up by the spade, which left the land in a favourable condition; and as that expense belongs to the potatoe crop, it consequently diminished that of the wheat.

EXAMPLE V. An acre of barley or oats after wheat.—Old Sussex method.

		l.	*s.*	*d.*		
Ploughing			17	6		
Five harrowings			4	4	1-2	
Harrowing in the seed			1	9		
		1	3	7	1-2	
Seed, five bushels	*l.*	1				
Rent and taxes		1	10	2	10	
Total	*l.*		3	13	7	1-2

The expense of *pulverising and harrowing in the seed*, in this example, is *l*1. 3. 7 1 2.

EXAMPLE VI. An acre of barley or oats after wheat.—New method.

		l.	*s.*	*d.*		
Scarifying the wheat stubble twice			3	4		
Raking ditto	*		1	3		
Collecting and burning ditto	*		4			
Spreading stubble ashes	*			6		
Scarifying three times			5			
Harrowing in the seed				6		
Labour and dressing with stubble ashes			14	7		
Seed, five bushels	*l.*	1				
Rent and taxes		1	10	2	10	
Total	*l.*		3	4	7	

If the items marked * be deducted from *l*0. 14. 7. the expense of *pulverising and harrowing in the seed*, amounts to *l*0. 8. 10.

EXAMPLE VII. Clover and ray-grass, among oats or barley.

	l.	*s.*	*d.*	
Rent and taxes	1	10		
Seeds and sowing	1	5		
Total *l.*	2	15		

In the preceding examples of the culture of wheat, I have separated the operations of *pulverising and drilling* from the other charges, in order that a comparison might be made between the old and new methods of preparing land, and putting in the seed.

By referring to page 8, it will be seen that the expense of labour bestowed upon an acre of wheat, according to the old Sussex practice, is - - - - *l*4. 3.

To which add rent and taxes for the year of fallow (which belong to the preparation,) *l*1. 10.

Total expense of preparation and sowing *l*5. 13. per acre.

According to the four preceding examples in the cultivation of wheat, the expenses of preparation and drilling by the new method are thus:

No		*l.*	*s.*	*d.*	
1.	Wheat after clover and ray-grass, the land ploughed once.	1	1	5	per acre.
2.	Wheat after wheat		11	10 1-2	ditto
3.	Wheat after tares		11	10 1-2	ditto
4.	Wheat after potatoes		7	9	ditto

This comparison shows that there is a clear saving of about five pounds per acre by the new method of preparation and putting in the seed.

By the operations of the scarifiers, without the aid of roller or harrow, the land is reduced to a finer degree of pulverization than can be attained by repeated ploughings and harrowings. This effect is produced with a rapidity, facility, and economy, that the customary method of cultivation does not admit of. The fields destined for wheat are all got in readiness for the seed within a few weeks after harvest: whereas by the old method, the fourth part of a farm is generally left unproductive for a whole year, before the new crop of wheat is put in the ground. From all these circumstances, added to the great difference between manuring at 20 shillings per acre, instead of *l*7. 10—it is not surprising that the difference of expense between the old and this new method should be so very great as will appear in the following comparison.

By the detail in page 8, the expenses of cultivating wheat, according to the old Sussex mode, are *l*16. 4. per acre.—The following abstract shows what they are according to the new method, and also the difference, or saving upon each acre of wheat.

		Total expense of new mode of cultivation per acre			Difference or saving per acre by the new method		
Example 1.	Wheat after clover	4	13	9	11	10	3
2.	Wheat after wheat	4	2	7 1-2	12	1	4 1-2
3.	Wheat after tares	4	15	10 1-2	11	8	1 1-2
4.	Wheat after potatoes	2	17	9	13	6	3

Although this comparison has been applied solely to the old Sussex practice, which is perhaps fully as expensive as any in the kingdom, yet it seems very probable that its application may extend to many other counties; for I observe by the reports of the proceedings on the corn bill, in the session of 1813–14, that in general the expenses of cultivating wheat are very high.

Mr. James Buxton stated his expenses in the cultivation of an acre to be as follows:

On heavy lands	*l*14. 2. 11.
On clay bottom	12. 14. 5.
On light lands	17. 10. 5.

Mr. John Brodie, of East Lothian, stated the expense of preparing his land to receive the seed at five guineas per acre, without including the rent, which is from *l*6. to *l*7.—or the cost of lime. These facts will be sufficient to demonstrate, I hope in a satisfactory manner, the eminent advantages that would flow from the general adoption of so very economical a system of cultivation as that which I have detailed, and which I am now successfully carrying into effect.

The grand source of all the heavy expenses of the old method may be traced to the fallow itself, and to the mode of preparing it. By bringing up immense slags with the plough, as already observed—by reversing the soil—and thus burying the seeds of weeds that had fallen on the surface, a foundation is laid for all the subsequent laborious and expensive operations. To avoid these, we must proceed in a different manner.—We have only to break and crumble the surface soil to any depth that may be required; to burn and destroy the weeds and the seeds of weeds in the manner I have described; and then we shall have the land in a fine clean state of pulverization, and in readiness for receiving the seed, without losing a year's rent and taxes: and all this at a mere trifle of expense, when compared with that which is incurred by a fallow.

☞ The plates referred to, will be furnished at the conclusion of the work.

THE PLOUGH BOY.

ALBANY: SATURDAY, MARCH 31, 1821.

Board of Agriculture.

Directions for using the Seeds distributed to the County Societies.

As the quantities, when they come to be subdivided amongst the Members of the County Societies, will be small, it is earnestly recommended to all who receive them, to pay particular attention to the cultivation of them, and to raise as large a quantity of seed from them as can conveniently be done, in order to spread the most approved sorts through the State.

TURNIPS.

A mellow soil well manured; raised into small ridges two and an half feet apart. The Plants thinned from eight to twelve inches apart. With a small plough take a slice from each side of the ridge, when the Turnip is in the rough leaf; and when the weeds are dead, return the earth to the ridges with a double mould board: repeat this operation as often as you please. Have a piece of ground, alike in all circumstances, pre-

pared and ridged by the 15th July: [Swedes earlier] sow all your varieties the same day, on or about the 15th, on different ridges: the sort that succeeds best, if they have all had the same treatment, upon the same sort of soil, is probably the sort you ought to adhere to. Save the finest Turnips for seed: bury them out doors with all their roots, the tops being cut off near the crown: cover them a foot deep, and plant them out in the spring on a rich mellow soil: hoeing them often and keeping them clean: when the seed is ripe, gather it in the morning whilst the dew is on the pods: it will not shell at that time. Feed your white Turnips first; the yellows keep much longer. Turnips and straw will carry the holding stock well through the winter; but hay should be given with them, to animals with young.

RAPE.

This is a very fattening plant of the Cabbage kind: the ground should be rich: it does well on burnt land. Sow the first of June; keep your plants clean: two pints to an acre is seed enough: it thrives best when sown on ridges, and attended like Cabbages. Turn your wethers into it in September, a few at a time: it scours them at first, but fattens them very quick. It goes to seed like Cabbages, the second year: secure the finest heads for this purpose, as you would secure Cabbages, and plant them out early in the spring.

SAINFOIN.

On chalky soil, this is remarkably productive Grass, and lasts ten or twelve years in the ground. It succeeds best in drills, ten inches apart; the seed covered an inch deep: keep your plants rather thin. When cured into hay, it should be cut before the blossoms turn much. This is a very fine hay for sheep: nothing is better to soil horses and cows with. Sown broad cast, one bushel of seed may be used to the acre: two pecks will do in drills. In collecting the seed, cut the grass when the early seeds are getting ripe, without waiting for the latter blossoms to shed. This is so valuable a grass that every Farmer should give it careful trial. It begins to flourish most when in the third year.

LUCERNE.

This is a very productive Grass, resisting the severest winters. Keeps in the ground ten or fifteen years, like the *Sainfoin*. It does best upon rich free loams, where if the soil is clean, three to five tons of excellent hay can be cut to the acre. It comes on so soon in the Spring, that it can be mowed when other grasses are beginning to start, and again be cut in July. Its early appearance makes it valuable for sheep.—The ground should have a warm dry aspect.—In France, where it is extensively used, a bushel to the acre is sown broad cast.

CHICORY.

A very hard plant resisting extreme heat and cold: very early in the Spring, and soon covers the ground. Does well on weak sandy soils, and from its great productiveness is a convenient food to soil cattle with. When cultivated for this purpose, it should be kept alone in rows a foot apart: when intended for pasturage, it may be soon broad cast, with Spring grain. Sheep thrive well on it.

SPURRY.

Does well on sandy soils, and is a favourite herb with sheep. Keep your plants clean.

BURNET.

This is a hardy tap rooted plant, fit for sandy soils: where the ground is in heart and clean, it will spread out and cover the ground, keeping eight pounds to the acre. It is very early, and on sands, is an excellent bite for sheep.

WINTER TARES.

Tares are a sort of pea: sow for a crop, two bushels to the acre broad cast, about the 25th August, on a mellow stubble, where the ground is in heart, and harrowed well in. In a sheltered situation, and under favourable circumstances, an immense crop of green food will soon be on the ground in the early part of Summer; which may be cut daily as it is wanted, for soiling horses and cattle in the stable. Tares are in great repute in Great-Britain. They make substantial hay, when cut before the pods are brown.

The Board of Agriculture hopes that these Seeds may all have a fair trial given to them, and that the result will be communicated to it from every County.

By order,

S. SOUTHWICK, *Secretary.*

March, 1. 1821.

☞ Editors throughout the State will please publish the above in their respective papers.

On the Management of Bees.

FOR THE PLOUGH BOY.

Sandlake, March 8th, 1821.

MR. SOUTHWICK,

If the following remarks upon the construction of an Appiary and the management of Bees, are deemed worthy an insertion in your valuable paper, the writer will think himself highly compensated for his labour.

In selecting a situation for the bee house, care should be taken to have it face the morning sun; for the sooner the house becomes warm, the sooner the bees will begin their work. The best method of constructing the house is to set posts firm in the ground, from six to eight feet apart, lengthways of the house: and to each of these a post four feet in the rear; small pieces of timber to be framed from post to post, for the support of the shelves. If the house is intended for patent hives, one shelf is sufficient. If for common hives, two or more may be made; the lowest one, about twenty inches from the ground. This will prevent mice and other vermin from disturbing the bees. At each end and in front, there should be folding doors; those at the ends to be opened in the warmest days of summer; this will create a current of air through the house, and enable the bees to continue their work without interruption, during the hottest weather; the door in front to be kept shut during those days in February and March, when the sun shines warm upon the south side of the building, which induces the bees to venture abroad to void their excrements and get water; as soon as they come in contact with the cold air, they fall upon the snow and are lost. Many a hive almost full of honey, has been deserted in this manner. It is very necessary that bees should be salted often (with fine salt,) during the working months; this will conduce to the health of the insect, and also improve the flavour of the honey. The worm that has proved so destructive to bees in this part of the state, may be prevented from making its ravages, by simply raising the hive two inches, with blocks, one under each corner; this will give the bees an opportunity to clear the hive of this pest, and other filth, and also keep the hive cool.

A few hints on the hiving of bees, I think will be of some use to those who are not used to their management. If the old hive stands in the sun, the bees will generally hang in clusters out side of the hive, for several days before swarming; if the swarm shews indications of going off, they may be stopped some times, by drumming on a pan, or any thing that will make a loud noise; this confines them. But most generally, if they have a place chosen in the woods, it is out of the power of man to stop them; if they do not fly very high, they may be followed by throwing dust among them.

When a swarm lights upon a tree or bush, they should be hived as soon as possible. The hive should be perfectly clean, and rubbed over with a solution of salt and water, and the flowers of red clover.

TO THE EDITOR OF THE PLOUGH BOY,

SIR—I have just seen in a late number of your paper, a Certificate, purporting to have been given by Alexander St. John, and others, stating that at the last annual Exhibition of the Agricultural Society of this County, the following Ploughs, viz: Burden's, Woods and Starbuck's, Mead's, the Scotch plough, and Wright's plough, were exhibited and tried at a ploughing match;—that they, the subscribers to the said certificate, being a committee appointed by the said society, for the purpose of examining said plough, and attending said match, found on examination, that Wright's plough did the best work with the least power; that they awarded the premium to that plough as the best exhibited; and that they also awarded the premium for the best ploughing to the person who held that plough.

It is true, that the premiums mentioned in this certificate, were awarded in the manner therein stated, and as I have neither the right nor the disposition, to impeach the candour of these gentlemen, I will only say of this part of the certificate, that their decision both in relation to the plough, and the work performed by it, was contrary to the expectation, as far as I could learn, of the whole concourse of spectators assembled on the occasion, among whom were several gentlemen distinguished for nice observation and accurate judgment in practical Agriculture; and that for myself, I was wholly at a loss to determine upon what grounds these premiums had been thus awarded, until I heard it suggested that the committee had preferred Wright's plough on account of its cheapness; it having been offered for sale that day at a very low price. But this decision was matter of judgment, and had the certificate been confined to the mere enunciation of the fact that such a decision was made, without naming the other ploughs which

were brought in competition with Wright's plough, and without any specification of the *grounds* upon which a preference was given to that plough, it might have been suffered to pass unnoticed. But the committee say that "they found" not only "that Wright's plough did the best work," but "*with the least power.*" Now if it had been *true* in point of fact, that this plough required the least power I am unable to perceive how these gentlemen could, in their official character, "*find*" it to be so, without witnessing some experiment by which the fact could be ascertained. Such an experiment was indeed made with the plough in question and Burden's plough, and I believe with no other; but not until after, (as I am morally certain,) all of the committee had left the field. Between these two ploughs the experiment, as I have been repeatedly informed, and never heard contradicted, was conducted as follows. Three gentlemen, viz. Mr. James Archibald, Jun. Mr. Archibald Anderson, and another, whose name I do not now remember, were mutually agreed upon between Mr. Burden and the person who had the charge of Wright's plough, to act as judges. The Deirometer was, under their inspection, successively applied to the two ploughs, and the result was decidedly in favor of Burden's plough, and was so declared.

I consider the certificate therefore as calculated to mislead the public mind, and it is with a view to counteract such an effect, that I request the publication of this statement in your paper.

Yours, &c. HENRY F. COX.

Canajoharrie, Mont. Co. 21st. March, 1821.

Early Peas.—Every attentive observer will remark among the plants of almost every kind of crops, some individual stalks which are distinguishable from the others by a greater degree of health, or luxuriance, or earliness, or some other peculiarity. A friend of mine remarked a few years ago a particular stem of peas among his earliest crop, which came into flower and ripened long before the others. He marked this stem and saved the whole of its produce for seed.—these came as much earlier as they had originally done. This produce was also saved for seed; and thus he obtained a particular kind of early peas, that came at least a week before the best he could buy in the shops, if sown at the same time with them. The doctor relates facts similar to this respecting wheat and beans. The general idea he means to inculcate is obvious, and extremely worthy of attention.

Andersons Recreations.

Recepe for the bite of a Mad Dog.—The bitten part to be dressed with a poultice of hot salt and onions; the wound to be kept from immediate healing by burnt allum or red precipitate, and the poultice continued; the diet to be abstemious, and all spirituous liquor, wine &c. to be avoided, as well as salt meat and grease of every kind. Bleeding every third day for three or four times, and emetics and cathartics to be taken. Plantain tea to be used as a common drink, and the mind to be kept easy and quiet. If spasms begin to shew themselves, a half wine glass of corrosive sublimate tincture to be taken in water three times a day till the mouth is affected; then intermit for three days, and re-commence till the same effects is produced. The tincture to be prepared by putting ten grains of corrosive sublimate into a pint of rum. The patient to return by degrees to his usual manner of living, after three or four weeks.

New Plan of a Fire-Place.

Mr. WILLIAM SCHUNEMAN, of Greene county, in this state, has patented a new sort of fire-place, which has some considerable traits of originality in its construction, and seems to be exceedingly well adapted for warming of rooms with a less quantity of fuel than perhaps any sort of fire-place of modern construction. Another excellence of it is, that it is an effectual remedy for preventing smoke. The whole fire-place may be made of cast iron, at an expense of from 15 to 22 dollars, according to the size, and the ornamental work bestowed on it. One of this description is now in use in the capitol of this city. We have also examined one, constructed in the plainest and cheapest manner, now in use in the bar-room of the tavern of Mr. Vedder, in Green-street, of this city. This, with a small quantity of fuel, seems to be amply sufficient for imparting a due degree of heat to a large room. The back of this is of cast iron, of about 22 inches in width and 26 in height; the circular upper part is of sheet iron, the jambs are merely one length and thickness of a common brick, and all the rest of the front of the old fire-place is closed with brick. The expense of a fire-place of this description, including the patent right, is from 5 to 6 dollars.

The back of this fire-place may stand as far out as the front of the jambs of that of the old, or it may be placed a little farther back if the hearth be somewhat narrow. The top part forms a segment of a circle, extended sufficiently forward from the line of the back. There are two narrow apertures, as long as the back is wide, for letting off the smoke into the chimney, the lower edge of the one being on a level with the lower edge of the circular part just mentioned, and the upper edge of the other being as high as that circular part will admit. The lower aperture has a damper, for stopping up that outlet at pleasure.

Thus far the plan of this fire-place seems exceedingly well designed. The remaining apparatus attached to it, for throwing the air which becomes heated behind the back into the room, though an old invention, has received little or no improvement, in the plan before us. Small apertures are made below, one on each of the outsides of the jambs, to let the air of the room into the enclosure behind the back, and when warmed it is let out again by two similar apertures placed about two and a half feet higher. When thus discharged, so near the fire-place, it is quickly drawn into it, and passes out of the chimney. The air that is thus to be heated should be let in by an aperture through the outer wall of the building, and should pass into the back part of the room, by tubes carried over head for the purpose, and discharged by giving it a direction downwards. Thus the back part of the room may be kept nearly as warm as that next the fire. Through the same outward aperture air should be let into the room, by a tube coming out on each side of the fire-place, giving the tubes a direction that will lead this air toward the fire; for by its receiving this constant supply of air from without, the warm air in the room is suffered mostly to remain there; but without this external supply of air, that warmed in the room is constantly drawn to the fire-place, and passes out of the chimney. The apartment, at the back of the stove, for warming air, should be of the same length and breadth as the back, and about 6 inches wide. It should be of sheet iron, fastened to the back, and perfectly closed, excepting the aperture for letting in the air from without.

These further improvements, which every one is at liberty to adopt, as they have no claims to novelty, we have thought proper to suggest, for rendering this fire-place as perfect as possible.

Mr. S. has had several of his fire-places erected in the counties of Columbia, Greene and Ulster. He has appointed DAVID BURHANS, Esq. his agent for this county, who can designate the masons appointed for erecting them.

The subscribers certify, that we have had constructed WM. SCHUNEMAN'S newly invented and useful fire-places—that they far exceed our expectations in carrying smoke, saving fuel, pleasantness and economy—that they are an excellent improvement, and that we consider them of great utility.

Martin G. Schuneman,	CATSKILL.
James Powers,	
Hezekiah Thayer,	
Peter Souser, Jun.	
Isaac Sandford,	
Abraham Salisbury,	
John Merrifield,	
Henry O. Demorest,	
Peter Goetschius,	
Wm. Schuneman, Jun.	
Adyjah Dewey,	CAIRO.
Thomas Stitts,	ATHENS.
Leonard Witbeck,	
James Van Deusen,	HUDSON.
D. C. Delemater,	
Edward O. Holly,	
Alexander Vedder,	ALBANY.

The subscribers have lately employed WILLIAM SCHUNEMAN, Esq. to construct fire-places for their use, and certify that their present impressions are, that they will answer an excellent purpose.

Henry Ostrander,	ULSTER COUNTY.
Elias Snyder,	

Dec. 8, 1820.

I certify, that I have made or constructed about 25 of the above invented fire places—that they answer every description above stated—that I verily believe that one half of the fuel required in ordinary fire places, will with these make the room more comfortable—that they are the best improvement that I ever made, seen, or heard of, and a remedy for smoky chimneys.

John C. G. Van Hoesen, *Mason*

Catskill, March 27th, 1821.

Weekly Summary.

—

Beginning of week before last, five bullocks were exhibited in Baltimore, which were allowed by the numerous concourse who viewed them, to be the most beautiful animals of the kind ever seen in that state. Several excellent sheep were also shown.

On Thursday, 15th inst. a grand procession took place at Philadelphia of upwards of *one hundred carts*, carrying beef, mutton, bear's meat, pork, &c. all of a very superior kind, belonging to the farmers and victuallers. "The uniform and handsome appearance (says a Philadelphia paper) of the mounted victuallers and draymen, the decorations of the horses and carts which conveyed the meat, the novelty of a completely rigged ship, a cooper's and a victualler's shop, borne through the streets on wheels, altogether, excited among the thousands of spectators a degree of gratification not often witnessed."

A similar procession, says the National Advocate, paraded the streets of New-York on Friday [16th inst.] with flags, streamers and a band of music, containing the fine beef in quarters, and neatly arranged, which were exhibited at the late cattle show. The first cart contained the superior beef which obtained the *first premium*, and which was raised in OLD DUTCHESS. The premiums, consisting of *silver pitchers*, &c. were also displayed. The attraction was very considerable; the day being remarkably fine, Broadway was crowded. The Englishmen declared that it equalled any thing in Old England; the Frenchmen said it was much better "dan de ros bif of Jean Bull;" and all the Irish were rejoiced at the sight in honour of St. Patrick, on whose festival this beef is to be sold.

***The Fat Ox* raised in Woodstock, Con. by Mr.** Nehemiah Jackson, which gained the premium at the Windham Cattle Show, on being slaughtered, weighed 1729 pounds, and yielded 317 pounds of rough tallow.

The following is the weight of a cow fatted and sold by Mr. Josiah Bronson, of Onondaga, to S. Woodruff, of Salina:---Hide 153; rough tallow, 172; four quarters, 913. Total 1228 This cow, notwithstanding she was extremely fat, had twin calves the last spring, and gave milk till November.

An ox now exhibiting at Philadelphia, which was raised by Mr Benjamin Woodward, of Monmouth county, N. J weighed, a few days ago, 3187 pounds. He is *twelve* feet long, measuring from the nose to the set of the tail; and his girth *eleven* feet. He is unquestionably the heaviest animal of the kind ever raised in the United States, and probably in the world.

A hog was killed by Mr. Gilbert Brownell, of Genoa, on the 31st Jan. 2 years and 3 months old, which weighed 900 lbs. before being dressed, and 838 after---and measured 7 feet and 2 inches in length, and 7 feet round.

***Pautuxet Annual Cattle Show.*—The Standing** Committee of the Society for the Encouragement of Domestic Industry, have authorised the distribution of 350 dollars in premiums, at the next annual Cattle Show.

***Mammoth Turnip.*—A Turnip was gathered** a few days since, near Catoma creek, measuring 3 feet 2 inches in circumference. The seed from which it was produced, was of the common kind and brought from N. C.

***Cotton Seed.*—Such is the demand for this ar-**ticle in Craven and the adjoining counties of Carolina, that there is but little remaining for those who are not already supplied. Should the ensuing season be favourable to its cultivation, there will be a large accession to the quantity of Cotton heretofore brought to this market.

The fine oxen of Mr. Wheeler, which bore off the first premium at the late Topsfield fair, as *working cattle*, were slaughtered a few days since, and weighed 22 hundred weight, one of them having had 21 lbs. of rough tallow.

***Expedition in Manufactures.*—A Philadelphia** paper mentions a recent instance of the manufacture of a goat skin into red morocco in the short space of 12 hours and 22 minutes from the time the skin was taken off the animal until it was finished. One pair of men's shoes of leather manufactured by the same process, was made in 2 hours 40 minutes, and one pair of ladies slippers in 1 hour and 25 minutes

***Steam Boat Invention.*—It is stated in the Co-**lumbia Telescope, that a Mr Ward, of that place, has so far improved upon the machinery presently used in Steam boats, as to dispense with almost every article except the boiler, the the cylinder, and the water wheel. He places the cylinder within the water wheel itself. It revolves upon its own centre of gravity; but its centre of revolution is different from that of the revolution of the water wheel. The piston rod is the pitman rod. It operates directly upon the wheel; and while it forces that around, is itself carried around. The steam passes through the gudgeon, on which the wheel revolves; and is conducted to and from the cylinder by means of tubes and stationary and rotary valves.

One of the steam boats in the Union Line, between Philadelphia and Baltimore, performed the trip between Newcastle and Philadelphia, 42 miles, in 3 hours and fifteen minutes. There was scarcely a breath of air stirring.

The steam boat Dolphin, arrived at Nashville, Ten. on the 21st of February, from Pittsburgh, after performing a passage of 1300 miles in *seven days and one hour*, opposed most of the time by strong head winds, and a rapid current for 200 miles up the Cumberland river.

***Handsome donation.*—The President and Di-**rectors of the Fulton Steam Boat Company, New York, have transmitted to the Mayor of New-Haven, one hundred dollars, to be applied to the relief of the sufferers by the late fire in that city.

A recent case of robbery of goods has been detected at New York, in certain packages from Manchester, amounting to 300 pounds sterling The loss falls on the importer.

A reward of *one hundred dollars* is offered for the apprehension of Nathaniel Wagner, who made his escape from Charleston Jail, on the 22d ult.

On the night of the 25th ult. the Distillery belonging to Capt. Samuel Mallory, of Hartwick, was burnt to the gronnd, and a large quantity of whiskey and grain wholly consumed. The loss is estimated at from 10 to 1500 dollars.

A merchant in Pearl-street New-York, a few days since, received from one of his customers in North Carolina, an order for a piece of the best broadcloth. On making out the bill, he was led to calculate what quantity of corn at the present prices in North Carolina, it would take to buy a coat from that cloth; and, adding something for his customer's profit, he found that a coat would cost as much as three hundred bushels of corn would bring.

The Legislature of Virginia has passed a re-solution directing the resolution of the Legislature of 1816, for collecting funds by subscription, to erect a monument on the Capitol square, to Gen. Washington, to be carried into effect.

Patrick Smith and wife, who were some time since, apprehended in New-York, upon a charge of robbing the mail, between Charleston and Savannah, (to which latter place they were lately sent) have arrived in Charleston for the purpose of being tried.

***Pick Pockets.*—A well dressed man was ob-**served, at White's show of Cattle, in Philadelphia, to lean very familiarly on the shoulder of Mr. Painter, one of the feeders of fine cattle. In a short time he disappeared, and Mr. Painter missed his pocket book!---containing 20 dollars, and papers of some value.

At Winchester, (Pen.) on the 3d inst. was caught, in Brandywine, the astonishing number of one thousand one hundred and thirty one fine Fish-- all at one haul. They measured between five and six bushels.

Proposals have been issued for reprinting an elegant edition of *New-England's Memorial*, by Nathaniel Morton, Secretary of the Colony of Plymouth, first published in 1669.

***Incendiaries.*—The Baltimore Telegraph cau-**tions the public against incendiaries, who have twice attempted to set fire to that city. A fire broke out on Sunday, but was soon got under, evidently produced by the torch of a villain.

On the 4th inst. the stables, butchery and outhouses of Mr. Clark, in the St. Lawrence Suburb, Montreal, were laid in ashes.

The Legislature of Pennsylvania have passed a penitentiary bill, almost unanimously, and appropriated 100,000 dollars for it; it is to be upon the Pittsburgh plan, solitary confinement

The proprietors of coach horses in snowy weather, should cause their horses' hoofs to be rubbed with soft soap before they set out. This will prevent the snow from gathering into a ball, and the animals will perform their journies with much more facility.

The whole quantity of land purchased by the United States, from the Indians, is estimated, in an official document, at 191,778,536 acres. The price agreed to be paid to the Indians, amounts to 1,542,946 dollars, or less than a dollar per hundred acres. The United States have already sold 20,188,482 acres, for 45,093,696 dollars, or more than 200 dollars per hundred acres. Net profit, 199 per cent.

A young girl, named Nancy Blackman, was lately murdered at Boston, by a maniac: he struck her on the head with an axe, while she was asleep in bed. Thomas Charles Bell, of the same place, was committed to stand trial, for inflicting several blows with his fists and with a club on an unfortunate girl of the town, who died shortly after.

The National Intelligencer condtradicts the report of a war having broken out in the Arkansas.

The city of Savannah contains 7520 inhabit-ants, including 3670 blacks.

***Ice Boat.*—A gentleman at Chambly, Montre-**al, having made a boat of this description, [running on skates, one on each side and a third near the rudder,] was lately sailing on the basin, when the wind shifted, blew violently, and carried the vessel at an inconceivably swift rate towards the rapid; fortunately, at the moment they were on the verge of destruction, their course was arrested by a large sheet of ice, the boat was stopped, the sails lowered, and they reached the shore in safety.

The latest accounts from St. Domingo, state that the troops at St. Marks and Gonaives had revolted; in consequence of which, from eight to ten thousand of the troops at Port au Prince had marched to quell them. It was their wish to establish a government of their own, and the cry was "Long live Prince Romeau"----but it was thought they would not succeed.

In consequence of the great depression of trade, the woolcombers of Bury St. Edmund's have again reduced the price for spinning yarn, allowing only 3d in every shilling's worth of spun yarn. This will affect from 20 to 30,000 spinners.

A hawk lately died in England which had been in the gardens at Bickling upwards of 50 years, and was an old bird when placed there.

The London papers speak of the arrival in England of a most surprising Ventriloquist, M. Alexandre, aged 21 years. He has been exhibiting on the continent of Europe.

Letters from Ireland, of a very recent date, present the state of that country in a most melancholy point of view. Most of the farmers are ruined in consequence of their land being held at the war-rents, which, from the extreme low price of provisions, they are wholly unable to pay.

Three individuals, at an Inn in a town in Gloucestershire, drank 6 bottles of wine, 22 bottles of porter, and 36 bottles of cider, at one sitting; after which they supped, and drank a glass of brandy and water together.

Europe is politically divided into 78 sovereign states, nominally independent; but if we consider the German Confederation and the Swiss Republic, as simple unities, the number of independent states will be reduced to twenty-three Their forces by land will comprehend about 1,600 000 soldiers on a peace establishment, and 8,660,000 on that of war. The maritime forces consist of about 409 ships of the line, 38 60-gun ships, 363 frigates, and 1,663 vessels of inferior rank, forming a toual of 2,463 sail, with 60,750 guns, and 282,409 men.

We have a confirmation of the death of the Emperor of China, and of the difficulty between two of his sons as the successorship. One was a favorite of the people, who wished to elevate him; but the lawful heir was said to be a fool, and unworthy the high office.

A hurricane on the River Plate, has destroyed many houses and 50 sail of shipping.

The Greek Islands belonging to the Porte, and their computed population, are 19 in number, with a total of 112,400 souls.

ALBANY: PRINTED FOR THE EDITOR,

BY HENRY S. DONLEVY,

No. 65, State-Street.

☞ COMMUNICATIONS and SUBSCRIPTIONS for this paper, received at the POST OFFICE. All letters from abroad, directed to the EDITOR Albany, will be duly attended to. Subscriptions are not received for less than ONE VOLUME. Each volume comprises twelve months, or fifty-two numbers; the numbers are issued weekly on Saturday. Each volume commences the first Saturday in June, from which time all subscriptions must be dated, either prospectively or retrospectively. No subscriber, therefore, can withdraw his subscription before the close of the volume with which it commences.

TERMS.—THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

PRINTING,

IN all its various branches, neatly executed at this office, with promptness and despatch.